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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
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10/522,483

10/24/2005

Michael Mohrmann

FI-54PCT

3845

40570

7590

07/17/2009

FRIEDRICH KUEFFNER

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NEW YORK, NY 10017

EXAMINER

HUTCHINS, CATHLEEN R

ART UNIT

PAPER NUMBER

3672

MAIL DATE

DELIVERY MODE

07/17/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |   |  |  |
|------------------------------|---|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/522,483    | <b>Applicant(s)</b><br>MOHRMANN, MICHAEL |  |
|                              | <b>Examiner</b><br>CATHLEEN R. HUTCHINS | <b>Art Unit</b><br>3672                  |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 11 is objected to because of the following informalities: the pre-amble from lines 1-9 should be deleted, and should be changed to “The device for driving boreholes in the ground as claimed in claim 1” to eliminate confusion as to whether new main shafts, shaft journals, etc. are intended to be introduced in this claim. Appropriate correction is required.

Claim 14 is objected to because of the following informalities: the pre-amble from lines 1-10 should be deleted, and should be changed to “The device for driving boreholes in the ground as claimed in claim 1” to eliminate confusion as to whether new main shafts, shaft journals, etc. are intended to be introduced in this claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 17, 18, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Mohrmann, DE4332113.

Mohrmann teaches a borehole drill, having a rotationally driven drill head 1 that carries out a wobbling movement (abstract) in addition to rotation, having a conveying line 14 that leads into a drill head space that the drill head exists in,

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such that wobbling movement of the drill head will inherently cause the cuttings to be transported to the conveying line, since as the formation is cut, debris will be moved by the rotating and wobbling drill head towards the intake of the conveying line; the drill head has a continuation that is the arms of 1a that penetrate the receiving end of the conveying line; the receiving end being at least partially annular in shape.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohrmann, in view of Akesaka, US4692062.

Mohrmann teaches the invention substantially as claimed, but does not teach breaking ribs provided adjacent the receiving end, for reducing the size of large pieces of drilled material. Akesaka teaches that it is well known in the art to

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use breaker ribs 17 for tunneling machines at the entrance of conveyor lines 34.

It would have been obvious to a person having ordinary skill in the art to modify Mohrmann in view of Akesaka to use breaker ribs to reduce the size of cuttings before they are fed into the conveyor line, for purposes of reducing clogging of the conveyor line.

***Allowable Subject Matter***

Claims 1-16 are allowed.

***Response to Arguments***

Applicant's arguments filed 5/28/2009 have been fully considered but they are not persuasive. Applicant's arguments that Mohrmann does not teach mechanically transporting debris to a conveying line due to the wobbling movement of the drill head are refuted. As described above, the drilling head will inherently move at least some of the debris created during drilling toward the entrance of the conveying line, since the drill head rotates over the conveying line. It is irrelevant what type of further conveyance means is used to move the debris to the surface.

Applicant's arguments, see remarks, filed 5/28/2009, with respect to the double patenting rejection have been fully considered and are persuasive. The double patenting rejection of the claims has been withdrawn.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CATHLEEN R. HUTCHINS whose telephone number is (571)270-3651. The examiner can normally be reached on Mon thru Thurs 7:30-5, alternate Fri 7:30-4 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David J. Bagnell/  
Supervisory Patent Examiner, Art Unit 3672

/CRH/  
7/14/2009